

10: d'Orleans--288

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(1891-92) 1894

Laos

116, 132, 788

"Pakou is a shrine for pilgrimages; the people come from Luang Prabang with great pomp several times a year; they hold boat races, get up picnics, and pray. The grotto has another advantage for us besides its religious interest, for it gives us a fine view over the valley of the Mekong; but it is the middle of the day, and the light is so intense that the distance is lost in a trembling atmosphere of heat. When we return to the pirogues, I find it is more than 125 degrees in the sun, and my alcohol thermometer has burst."

CHAPTER XVII

LAOS

LAOS from 10,000 feet was a grey-green frothing seen through a heat-mist that was like a pane of dirty glass. As we came into Vientiane in the late afternoon the mist thickened and the pilot came down as if to look for landmarks. For the last half-hour bundles of rags kept whirling past the cabin. They were vultures — bad things to hit at two hundred miles an hour. We landed bumpily in a haze, as though bonfires had been lit round the field; and in this the sun wallowed — a diffused yellow disc. As the door of the cabin was opened, the heat rolled in.

In most journeyings there stands out the memory of days of discouragement; when the enthusiasm flags under the strain of petty physical discomforts. The introduction to Laos was spent in such a period. This was the earthly paradise that all the French had promised; the country that was one vast Tahiti, causing all the French who had been stationed there to affect ever after a vaguely dissolute manner. To be fair to Laos I was seeing it at the worst of all possible seasons — it was late March — when the air is burdened with the presage of storms and the landscape blighted with autumnal sadness. Heat lay like an interdict on the town of Vientiane, although the sun was wrapped until late morning in a sweltering mist. At certain hours, out of the stillness, a hot wind rose suddenly and skirmished in the streets, producing a brief, false animation, flapping huge leaves in the faces of passers-by, who were half disembodied by the swirling dust, above which they floated like genii. Sometimes the grey, swollen sky squeezed out a few drops of rain.

I was lodged in the government guest-house, a European villa — since it had two storeys — which at some time had gone native, with earthenware dragons crawling on its roof. Hornets had

A DRAGON APPARENT

132 started cellular constructions in the window shutters and armies of
485 cockroaches marched across the floors. Precious, expensive water
was brought in large pots and left in the subdivision of the room
where, using a gourd with a hole in its bottom, you could take a
shower. The main advantage of having this open pot of water in
the room was that it collected a gauzy layer of mosquitoes which
were content to stay there in harmless concentration, unless dis-
turbed. The Mekong could be seen from the window, a shallow
strip of water across half a mile of whitened river-bed. Perhaps
this drought had something to do with the town's electrical generat-
ing system, because only occasionally — and never at night — would
the filament of the electric light bulb consent to glow feebly.
Whenever the hot wind sprang up, stirring the trees round the
house, great dry leaves as big as dishes came tumbling down and
fell with a crash in the layer already deposited on the earth. It was
the death-rattle of the year, which in Laos expires in croaking
senility, to be re-born with the raging storms which were about to
break.

346 Vientiane is a religious centre, one of the two ancient capitals of
Laos. It abounds with pagodas, many of them deserted and in ruins;
and colossal Buddhas, with dusty half-obliterated smiles, sit in the
tumbled brickwork.

527 Since at this time¹ when the earth had dried up, there was no
794 work to be done anywhere, it was the season of *bouns*; the Laotian
festivals. Each pagoda holds one, as a means of collecting funds.
They last for three days, and although an attempt is made not to
hold two *bouns* at the same time, there are so many pagodas that
duplication cannot always be helped; so that every night for several
weeks the sky over one or more districts of Vientiane glows with
the reflection of thousands of lights, while from a distance one
catches the gusty, carnival sounds of Laotian rejoicings. *Bouns* start
at about eleven, and go on all night.

527 The first night after my arrival I went to a *boun*, which I found by

seems to be a cloak of verdure with deep, harmonious folds. Its bed is deeply cut and scattered with rocks and rapids as far as a point upriver from Vientiane where it attains an average width of 900 meters. Enormous calcareous rocks strung out like beads or laid on in cliffs like a veneer alternate with graceful beaches, and here and there hamlets cling to the hillsides which are lit up, as if by a flame in the sun, by the gilded spire of a pagoda. . . . 133

After describing a sharp bend to the south it flows peacefully towards Savannakhet between low banks which are now sandy and now covered with vigorous vegetation. It is 1500 meters in width, and its waters are deep enough in this level stretch to permit steamboat navigation all year long. Downstream from Savannakhet stretches a sudden succession of staggered rapids over a /7/ length of about 160 kilometers. These are the "Khemmarat." The current is extremely violent and forms eddies and whirlpools, while an irregular channel winds in the midst of the rocky bed. "The yellowish waters break against the rocks with a dreadful noise. Men have fled its banks, and the great trees of the forest lean from both sides over the abyss, into which their weight often drags them. A few daring fishermen have made themselves homes in the crags of the rocks, but these unfortunate creatures scarcely have time to flee when the first rains come, so great is the rapidity with which the waters of the river rise" (1).

1. De Carné, Voyage en Indochine et dans l'Empire chinois.

When it leaves the rapids the Mékong widens out (two kilometers), with isles of verdure scattered here and there, and again becomes navigable as far as Không, the old capital of Lower Laos. Its banks grow higher again, and many villages rise in the midst of rich and fertile plains. It reaches a width as great as eight or ten kilometers and gives birth to an important group of islands, including the island of Khône which is famous for its waterfalls which bring navigation to an absolute halt. A railroad has been built across the island by the French administration to serve as a connecting link /8/ between the level stretch of Không and that of Kratié (Cambodia). /134, /496,

Laos ends at South Khône, and the coastal reach of the Mekong, which belongs to Cambodia and to Cochinchina, begins.

The great river is fed from the left by multiple tributaries, the chief ones of which (Nam-Ou, Nam-Ngum, Nam-Ka-Dinh, 133 132

- 133 Sé-Bang-Fai, Sé-Bang-Hiën) descend from the western slopes of the
132 Annamitic Chain. Its tributaries on the right are few in number and
unimportant (Nam-Moun). The rate of flow of all of these, like that
of the Mékong, is subject to the variations of the seasons, which are
themselves conditioned, in the tropical zone in which all of Laos is
situated, by the alternatively dry and rainy monsoons.

- 114 which he felt during his stay in Laos, despite the somber presentiments which prevented him, as he admits, "from appreciating and enjoying things as formerly."

For three years he had been a tireless explorer of the Indo-Chinese brush, a prey to the fatigues, the miseries, the privations and the dangers of the sly and evil forest. A poor traveler, as he himself ingenuously relates, he had sacrificed his family, his comfort and his health (and perhaps his life) "to the sole end of being useful to his fellow men, of discovering an unknown insect, plant or animal /220/ or verifying a latitude point in a remote region."

- 133 Leaving Bangkok on April 12, he reached Paklay on June 24 after
361 crossing the terrible forest of the "King of Fire" for the second time and breathing "in the midst of an atmosphere of extreme stench, hot like a steam bath filled with putrid miasmas." Paklay was a great consolation to him. "A charming village," he wrote, "very rich, larger and more beautiful than any which I have so far encountered. The houses are elegant and spacious, and everything denotes an ease and well-being which I have since noted in all the localities where I have stopped. The Mekong is much wider there than the Menam at Bangkok, and it is with a noise like that of the sea and the impetuosity of a torrent that it cuts a path between high mountains which seem to have difficulty containing it in its bed. . . . The sight of this beautiful river had the same effect on me as meeting a friend, for I have long drunk of its waters. It is an old acquaintance, and has long cradled and tormented me. Now it flows majestic, full to the brim. . . it is a truly grandiose spectacle."

Dissuaded from going up the Mekong by the inhabitants, who feared that some mischance might befall him /221/ /Page 221 is devoted to an illustration: "The Mekong at Paklay."--Translator/ in the rapids, he resumed his journey on elephant back and reached Luang-Prabang on July 25. "A delicious little city," he noted, "which stretches over a space of a square mile and holds a population, not of 80,000 inhabitants as Mgr. Pallegoix says in his work on Siam, but of only seven or eight thousand. The site is charming, and the mountains which frame the city form a circular valley in the shape of an amphitheater nine miles wide which must once have been a closed basin. The countryside is extremely pretty and reminds one of the beautiful lakes of Como and Geneva.

- 132 "Were it not for the sun of the tropics which shines constantly on this valley, or if a gentle breeze tempered the overpowering heat which prevails there during the day, this spot would be a little paradise.

What would he have said -- and what would not have been his delight -- if he had reached the smiling capital not in July when the tropical sun does indeed alternate its hottest rays with cataracts of the most violent downpours, but in December or January during the delicious Laotian winter which spreads the sweet coolness of Mediterranean springtime over an autumnal decor? He could scarcely have been able, in the course of his hunts for insects, to grasp /223/ a fugitive vision, between two tornadoes, of the golden minaret of the Phou-Si, the sacred hill in the heart of the city, or of the harmonious suburbs all trembling in their mantles of verdure, or of the flaming twilights on the misty mountains at whose feet winds the capricious Nam-Khane, a true river of diamonds by moonlight... 132 ●

"The city," he explains, "is built on both banks of the river, but the greater number of dwellings are built on the left bank. The largest part surrounds an isolated peak which is a hundred and some meters high and at the summit of which a pagoda has been established." /361/ 361

On August 5 he was presented "to the princes who govern this little State and who bear the title of kings." He depicts them (Tiantha-Koumane and his brother the Oupahat Oun-Kham) with a dash of bantering irreverence, then immediately acknowledges that the king is "kind and good" to him (1). 643*

1. "He takes care of my letters. He himself will take them to Bangkok where he goes, I believe, to take his oath of allegiance and vassalage." "I do not know why," he continues, "but they display in my behalf all that they are capable of imagining in the way of pomp and splendor." /648*/ 648*

He is thus the first to note the dominant character trait of this kind, open-hearted /224/ and hospitable people. Tiantha-Koumane was certainly ignorant of his guest's capacities and had no opinion on the naturalist Mouhot, who was still quite unknown in Europe. It was therefore not the scholar whom he intended to honor, but simply the stranger and the traveler whose visit was a happy event for the kingdom, an event which should be celebrated with great pomp and with general rejoicing. All the Frenchmen from Pavie down to our own day who have explored the principality have been given a welcome which has always been just as spontaneous and have been received with the same eager and smiling good grace. 609 157 643*

wind like gigantic Russian mountains" (1).

(1) Bulletin de la Soc. de Géog. commerciale, 1898, Vol. XX, No. 12. Dr. Lefèvre, "Le Haut Laos, sa situation économique."

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The slopes are sheer, a fact which explains the torrential character of the great river and its tributaries. Thus Xieng-Hong is at an altitude of 700 meters and Vient-Tiane is at about the 300 meter level, making a difference in level of 400 meters over a space of four degrees, whereas from Vient-Tiane to the sea, that is to say over eight degrees, the drop is only 300 meters.

The country has a wild look and the high chains, cut here and there by deep valleys in which torrents flow which are often invisible, are covered with immense impenetrable forests. The traveler who explores these regions sees only tall grass or gigantic trees intertwined with lianas. Then all at once a break in the foliage shows the cascades of a river. This is the only noise which comes to interrupt the impressive silence of the great forests.

The highest points of this northern mountain mass are Pou-Fai in the province of Muong-Ngot (1600 meters) and Pou-Loi, mentioned above, in Luang-Prabang (2000 meters).

Further south, between Nam-Khan and Nam-Sana, comes the vast plateau of Tran-Ninh which stretches over an area of 1200 square kilometers. This mass, the average altitude of which varies between 1000 and 1500 meters, is crossed by sheer valleys through which flow torrents and rivers ending either at the Mékong or the Gulf of Tonkin. It is a superb region with a temperate climate (2).

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(2) An obvious spot for establishing a sanatorium.

fertile soil and luxuriant vegetation, and would be admirably suited to any kind of livestock breeding or large-scale farming. Its remoteness and especially the difficulty of communication are, for the moment, the only obstacles to the success of any plans which one might make.

Slightly to the north of the 18th parallel there branches off the long chain which ends at [46] Padaran, that is to say at about the 11th parallel. It is known as the Annamitic Chain and forms a clear-cut line of demarcation between Laos and Annam. It is also

132 a climatic dividing line. On the Annam side, in fact, each monsoon
 133 has its rainy season, a fact which makes it possible to grow two rice
 241 crops per year. On the Laotian side there is one rainy season and
 one dry season. The two are sharply separated, so that there can be
 only one crop. The chain runs parallel to the coast of Annam in a
 northwest-southeast direction, leaving Annam only a narrow strip of
 terrain, while it enables the Mékong to be joined on its left bank by
 watercourses which often stretch over wide extents. On the Annam
 side the slopes are steep and the valleys narrow. On the Laotian
 137 side the slopes generally do not terminate so abruptly. They come
 down to the Mékong in successive stages, first forming plateaus or
 folds in the terrain which are covered with thick forests (Dong in
 Laotian), then gentler undulations on which there are forest glades
 (Khok in Laotian) and finally the vast ricefields which stretch down
 to the Mékong.

137 The large thick forests have the same wild appearance as in
 132 northern Laos. Oftentimes they do not even let the sun's rays through,
 and form domes of foliage which hide the horizon.

The forest glades have two different aspects, depending on the
 season. During the rainy season there is shadow and often a carpet
 of verdure, while during the dry season the bare trees and the naked
 soil which is covered only with dead leaves and reflects the burning
 rays of the sun, give the appearance of a desolate and abandoned
 land.

133 The Annamitic Chain first separates the Nam-Nieng, a right-hand
 tributary of the Nam-Ka-Dinh, from the Song-Ca which flows into
 the Gulf of Tonkin near Vinh. It enters the province of Cammon,
 where its average altitude is 1000 to 1200 meters. The ridge of Tram
 Mua, on the road from Vinh to Pak-Hin-Boun, is at the 1280 meter
 level. In Cammon there are, so to speak, no forest glades. [47]
 [Illustration] [48] [Blank page] [49] for the plateaus themselves
 usually run down to the banks of the Mékong.

133 Of the latter, the most noteworthy is that of Na-Kaï or Pou-Hac,
 137 the limits of which are formed by the courses of the Nam-Hin-Boun
 and of the Sé (1) -Bang-Faï. This vast plateau lies at an altitude

(1) Nam and Sé mean river. Nam is the term generally
 employed in northern Laos, and Sé in southern Laos.

of about 800 meters and, like the plain, is covered with forest

glades, but "instead of the oil trees, bogus teaks with their whitish foliage and their trunks deeply dented with wide grooves, we find gigantic, shade-giving pines; and instead of the bare, powdery or viscous soil, a fine level turf on which it is a pleasure to walk and where it is enjoyable to linger and slow one's pace" (2).

(2) Letter from Captain Rivière, reproduced by Captain Gosselin in *Le Laos et le Protectorat français*, 1900.

It is also a region of wild beasts, and the inhabitants of the muong of Ma-Ha-Sai come there every year to hunt elephants.

At the very source of the Sé-Bang-Fai there springs up a noteworthy peak about 1200 meters high from which many watercourses flow down to the Annam coast.

South of this point the Annamitic Chain drops to give way to the gap of Ai-Lao (about 410 meters in altitude) on the road from Savannakhet to Quang-Tri. Then the chain rises to form walls which are often more than 2000 meters high in the provinces of Saravane and Attopen. Thus, Pou-Aouat has an altitude of about 2500 meters. It is an important orographic center from which spring the Sékhong and the Poyo, which belong to the Mékong basin, and also the Song-Buong, a tributary of the Song-Cai which is a coastal river of Annam.

Between the Sédone and the Sékhong, at about the 15th parallel, stands the remarkable plateau of the Bolovens, which takes its name from the Kha tribe which inhabits it. It is a mass about 100 kilometers in diameter, and its height varies between 600 and 1200 meters. Travelers who have explored it have extolled the mildness of the climate, the wealth of the vegetation, the beauty of the plains and the abundance of water, so [50] that Dr. Harmand suggested the idea that the plateau, which could easily be linked by road with the port of Tourane, might be made into the administrative center and sanatorium of our Indo-Chinese empire.

The part which the plateau may be called on to play in the future has been somewhat exaggerated. It would be imprudent to envisage it as a wonderland, [Illustration here] an eldorado destined to a great future from the administrative, commercial and sanitary point of view. Today it is a plateau with well-cultivated slopes which yield fine harvests of cardamom and rice, as well as tobacco, cotton and Chinese nettles [ortie de Chine], and is inhabited by gentle, peaceful folk who live in handsome, well kept-up villages.

133 Mississippi and the rivers of western Europe. At Lakhône in Laos, Delaporte estimated the flow of the river to be 1350 cubic meters per second at the end of the dry season. In Bassac Garnier found 9000 cubic meters on December 5, and the waters had already fallen nine meters and the average velocity of the water was then only one meter per second. His calculations gave him [55] more than 50,000 cubic meters for the rate of flow in the period of high rising. Where the delta forks into three branches it must reach sixty or seventy thousand cubic meters. According to Boulengier it would be even higher than this enormous total. Whatever the case may be, the standard cannot be set at less than 12,000 cubic meters."

b.--HIGH AND LOW WATER PERIODS

• 132 We have already noted that in Laos there are two distinct seasons, a rainy season from May to October and a dry season from November to April. On the river the rainy season corresponds to the high water period, and the dry season to the low water period. 133 The enormous valley of the Mékong does not fill or empty instantly. Its waters are always subject to either a rising or falling movement and, except perhaps for the months of March and April, the period when its waters are lowest and its oscillations are very slight, the river always shows a more or less marked rising or falling tendency. It will also be seen that on a river whose extent is so considerable and whose course is so capricious, now encumbered by rocks which obstruct its bed and now flowing peacefully through vast plains, the risings will not be the same at all points of its course. Through an odd peculiarity one of the highest water marks to be observed on the whole river is found on the island of Khône near what is perhaps the lowest mark. Thus at North Khône risings scarcely reach a height of 1.5 meters, whereas at South Khône, five kilometers downstream, they often exceed 18 meters. The average rising of the river is from ten to twelve meters and is due first of all to melting snows in Tibet, but especially to the rain brought by the southwest monsoon.

[107] [Illustration here]

CHAPTER III

1. CLIMATOLOGY

132 The climatology of Laos is not uniform, but varies with altitude, with latitude, with the direction of the valleys, with the position of the plateaus and with the nature of the region, which may be dry or humid, wooded or bare. It also depends on the constitution of the soil and on whether it is alluvial or eruptive, compact or powdery, light in color or dark, etc.

[134] It would be extremely difficult to give absolutely detailed information on this important question unless we were to cite all the points of Laos one after the other, giving each one's climatic peculiarity.

This task can only be undertaken with the help of [108] meteorological stations, which have already been installed at several points and which we must hope to see become more numerous and better equipped so that they can be in a position to collect and group observations for a whole year. While awaiting more complete and detailed studies, we may divide French Laos, from the climatological point of view, into two parts, a southern part extending from the 13th parallel to the 18th, and a northern part from the 18th parallel to the 22nd.

Situated south of the tropic of Cancer, the land is subject to a monsoon regime which includes two distinct seasons, especially from the hydrographic point of view. These are the rainy season and the dry season, which divide the year nearly in half.

We must, however, make a slight reservation in the case of certain parts of northern Laos where, by reason of the high altitude, there is a sort of mixed half-season between the rainy season and the dry season in the strict sense, which is characterized by foggy weather and a rather low temperature.

In general, the rainy season corresponds to the southwest monsoon which prevails, theoretically, from April or May to October. The dry season is dominated by the northeast monsoon, which follows the above and consequently extends from October to April.

The rainy season begins with staggered storms, short but violent,

132 and accompanied or preceded by hurricanes, cyclones and even
tornadoes, sudden showers, hail, etc.

[241] The first manifestations of the rainy season occur in April after
a period of two months during which great dry, hot winds blow which
make respiration difficult. Clearing mountain land and burning the
stubble in the ricefields further increase the natural heat of the
atmosphere, for it is at this time that the stubble is burned in order
to obtain soda with which to fertilize the next crop.

The first storms are preceded by high electrical tensions
which light up the horizon, but without thunder. Then when the
clouds break the water of the first storms comes down in veritable
sheets. The earth, which has become hardened and cracked for
nearly a meter below the surface, [109] begins to steam. It absorbs
instantly, so to speak, and without leaving any traces thereof, the
enormous quantity of water which pours down, exuding an odor sui
generis and freeing clouds of mosquitoes, myriads of febriferous mi-
crobes and other infectious bacillae.

When the rain stops between two storms the purified atmosphere
becomes light and diaphanous. The electrical tension disappears, the
air is saturated with ozone and the temperature falls several degrees.
The refreshed leaves absorb carbon dioxide more easily from the air
and consequently give off more oxygen, and men as well as animals,
panting and oppressed a few moments before by the heavy heat, enjoy
the happy effects of the rain.

During this period the temperature rises at night and people be-
gin to rid their beds of the blankets which had been necessary ever
since December.

Depending on the altitude, the latitude and the disposition of the
terrain, the variations in temperature for the two parts of Laos from
March to May are as follows:

1. Northern Laos:

(a) Valleys and Low Plains

Morning.....	20° to 22°
Noon.....	25° to 30°
Afternoon.....	15° to 25°
Night.....	15° to 20°

(b) Plateaus and High Valleys

Morning.....	15° to 17°
Noon.....	20° to 25°
Afternoon.....	10° to 15°
Night.....	10° to 12°

2. Southern Laos;

(a) Valleys and Low Plains

Morning.....	25° to 29°
Noon.....	30° to 40°
Afternoon.....	24° to 26°
Night.....	24° to 25°

(b) Plateaus and High Valleys

Morning.....	20° to 26°
Noon.....	26° to 31°
Afternoon.....	19° to 23°
Night.....	19° to 20°

In May the storms grow more frequent and gradually change into great downpours, either with or without thunder and lightning. The [110] electrical tension is greatly lessened and the precipitation of water lasts longer, although it is less violent and more vertical.

The soil soaks up more water each day and soon reaches a saturation point. Then the level of the watercourses begins to rise quite appreciably.

The fires in forests and ricefields, which sprang up again between the early storms, are now permanently extinguished and no longer fill the air with their bitter, hot odors and their carbonized organic debris.

Vegetation takes on new life, Green stems spring from the burned plants, the dry grass grows thick and verdant and the trees which have lost their leaves show new buds, new leaves and then flowers. Once the wet season is well established, that is to say in June, the weather remains cloudy and rain falls in great downpours which are almost daily in occurrence and more or less continuous depending on the year. It sometimes lasts for several days and several nights.

In July and August the rain reaches a maximum and the watercourses reach their highest level. The temperature falls an average of four or five degrees. But the air is saturated with a great deal of humidity and prevents the evaporation of perspiration, thus making these two months quite unpleasant despite a slight drop in temperature.

In September the downpours grow more infrequent, the storms reappear, the temperature falls still further and there are no longer risings on the watercourses. October marks the end of the

rains (1). The sun reappears, the rivers fall, the land dries out and

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(1) The amount of rainfall in middle Laos in 1894 and 1895 was as follows, according to Lieutenant Commander Simon;

1894.....2,233 meters

1895.....1,410 meters, an exceptionally dry year.

By way of comparison, the amount of rain which falls in Paris in an average year is 0.56 meter. (Lecture delivered before the Paris Geography Society [Société de Géographie de Paris] on May 15, 1896.

the roads become passable once more. This is the time when traveling and commercial transactions are resumed.

[111] November, December and part of January are characterized by a delightful temperature. The earth is moist, and the heat of the sun is tempered by light mists.

In southern Laos the temperature falls as low as 12° in the valleys and 7° on the plateaus. The annual mean temperatures are, respectively, 22° to 25° and 12° to 14° .

The nights are generally cool and there is abundant dew. Light hail is also observed occasionally, and woolen clothing and blankets are indispensable.

In the northern part of Laos, which is higher and more mountainous, this period which forms the mixed half-season referred to above extends from November to January, inclusively, and constitutes a true winter. The temperature sometimes falls as low as 5° in the valleys and 2° on the plateaus. The average for the season varies from 12° to 18° and from 8° to 11° at the same points. In some years there have been a sort of very fine hail, and sometimes even a very light frost. Fog covers everything until nine or ten o'clock in the morning, the time when the sun appears, pale and cold.

During this part of the year it is necessary to keep a fire night and day, and to dress in warm clothing.

In January the morning fogs stop. The mornings and nights are fine, but the heat begins to be felt during the day and the earth dries out more and more.

Then comes the period of great winds, with the fires in forests and ricefields which last, as we have seen, until well into March.

- 132 • Vegetation dries out then, and some plants and trees even lose their leaves. The earth cracks and pulverizes under the action of the drought and sun.

2. METEOROLOGICAL STATIONS

[654]

The meteorological system of Laos includes:

1. Main stations:

Vien-Tiane, administrative capital of Laos and seat of the Superior Residency.

[112] 2. Secondary stations:

Luang-Prabang, Savannakhet, Khong, Attapeu.

3. SANITARY CONDITIONS

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At the beginning of the rainy season the body is tired out after the excessive drought and heat of the last two months, and is pre-disposed to attack by the fever-bearing mosquitoes and various bacillae for which river water serves as a vehicle after it has watered the vegetation. It is then that the many different kinds of fever strike, with their characteristics varying depending on season, region, race, individual and temperament. Attacks which take a pernicious form are rare, however, both in the natives--who are nevertheless without preventive treatment--and in Europeans, who are better protected by a good diet and specific medication.

To be sure, in a form which may be more or less benign these attacks of paludism end, in the long run, by damaging even those temperaments which are most robust in appearance, especially if the latter suffer from any kind of stomach, liver or intestinal disorder. It is also at this time of the year, as well as during the first cold spells, that dysenteric diarrhea and diarrhea in the strict sense occur, striking both natives and Europeans.

The cause of these afflictions may be attributed, in May and June, to excessive ingestion of insufficiently ripe fruits and vegetables, and in November and December to nocturnal abdominal chills. The various liver ailments also strike during the changes in season.

Cholera is epidemic in the country, and reappears at more or less distant intervals. Each year, however, diarrhetic cholera claims a number of victims among the native population.

000 advised for persons who suffer from any weakness in any of these organs.

• 132
529 Although situated in the tropical zone, Laos has regions where a climate like that of Europe prevails during several months of the year and where Europeans who were fatigued by their stay in the low plains or hot valleys might go each year to recover and regain strength and vigor.

We may mention, among other regions, the plateau of the Bolovens, which is recommended by Dr. Harmand, but especially the plateau of Tran-Ninh and the high valleys of the Hua-Pahn.

In Tran-Ninh and the Hua-Pahn, particularly from November to March, that is to say over a period of five months, the thermometer falls as low as nearly 2° and rarely rises above 25° .

[122] The morning, the late afternoon and evening, and the night are delicious on these plateaus, while the middle of the day is quite similar to springtime in the south of France. The air is healthy and dry, walking is pleasant and the views varied.

There are already European groups in Xieng-Khouang and Muong-Son, since these are province capitals. A few supplementary buildings would be enough to turn them into sanatoriums, without aiming at all that the word implies in the way of equipment, but merely at the establishment of rest spots where officials and colonists from other regions could spend a few months or weeks of healthful vacation time.

5. HEALTH SERVICE

744 Health service in Laos is in the hands of three colony physicians who direct infirmaries located at Khong, Vien-Tiane and Luang-Prabang.

In each of these infirmaries consultation and hospitalization services are provided for Europeans, civil guards, Annamite and Laotian interpreters and scholars, and for native employees.

The costs are partly paid out of receipts from payments made by the colonists and native employees for each day of treatment and, in Luang-Prabang, out of a levy on the Royal Treasury.

The Khong infirmary is equipped with an ice machine which supplies the needs of the medical service and those of the Europeans in the region, in return for a fee. The Vien-Tiane infirmary has to have received one in 1900, and it is to be hoped that Luang-Prabang will soon be similarly equipped.

487
491

1. From Luang-Prabang to Bangkok by way of Pitchai.
 Luang-Prabang to Pak-Lay (Mekong)..... 4 days
 Pak-Lay to Pitchai (Siam) by land..... 10 "
 Pitchai to Bangkok (Menam)..... 11 "

Total 25 days.

Length of return voyage..... 50 "

Entire trip, going and return..... 75 days.

2. From Luang-Prabang to Vien-Tiane by way of Muong-Khassy, Som-Di and Tourakome, in 11 to 12 days.

[132] This road belongs to the second category, but only during the dry season. Certain parts are flooded in the plains or impassable in the mountains during the rainy season.

3. From Luang-Prabang to Vinh (Annam) by way of Tran-Ninh. By land to Tha-Do, going either through Ban-Pak-Sa and Xieng-Det, or through Sop-Vi and Muong-You to reach Xieng-Khouang (Tran-Ninh); from Tha-Do to Vinh via the Song-Mo and the Song-Ca. Length of trip 20 days, and of return trip, that is to say from Vinh to Luang-Prabang, 30 days. A minimum of 50 days for the round trip (1). A second category road.

(1) This route is extremely picturesque, and the Superior Resident describes it as follows:

"For tourists I should recommend all of this route from Luang-Prabang to Xieng-Khouang by way of Muong-You, especially the part between Sop-Tia and Ban-Namat, a part of which our present maps do not give any idea. Between these two points one crosses the Pou-Hong, a very high peak. The road follows the crest almost continually and passes over the highest point. When one reaches the last peaks, the view stretches out in all directions as far as the eye can see and one can then gain some idea of Laos and particularly of the kingdom of Luang-Prabang. Everywhere, on all sides, there is nothing but a chaos of mountains pressed against one another, and the location of the valleys is indicated only by a few bands of mist, especially at the beginning of the rainy season. Above these mountains rise isolated needles of calcareous rock which have extremely bizarre shapes.

"On the plateau from Ban-Sot to Xieng-Khouang, one would really think that one was on one of the plateaus of the Juras or of

Meo

516 progresses at an even, elongated pace, carrying as much as 20 kilo-
 417 grams in his pack without even seeming to suspect the feats of strength,
 [132] suppleness and balance which he accomplishes. As long as he remains
 on high ground his resistance to fatigue is very great indeed, but he
 cannot go down to the lowlands without danger, especially in the hot
 season.

101

Certain authors claim that the word "Meo" which, when pronounced
 with a certain intonation, means cat in several Indo-Chinese languages,
 was given to these folk by reason of their agility. However, we must
 note that in [109] Laotian the word "Meo" used to designate these
 mountainfolk is neither written or pronounced like the word meo
 which is used to designate cats. There is the same difference between
 these two words as there is in French between the words maitre and
 mètre.

342

[592]

A Meo house is built at ground level on slightly leveled ground.
 The walls are made of puddled clay or of ill-fitting boards, and the
 house is roofed with thatch or crudely-squared wooden shingles. The
 doors are made of wood which has been shaped with an ax, and there
 are no windows. Often several families live in the same house, and
 then each has a fireplace to itself and a compartment which serves
 it as a bedroom. In the common room there is an oven and fireplaces
 above which objects are placed to dry on a bamboo framework.
 Behind the house a narrow passageway is left free separating the
 building from the sheer mountainside. In front there is a narrow
 veranda where the horses are kept when they are not housed in a
 stable built on piles and overhanging the mountainside, as are the
 animal barn and pig sty, the rice granary and the goat pen. This
 system has the advantage of protecting the animals from the dampness
 of the ground, since the planks which form the floor jut out over
 empty space on their solid piles.

[343]

[101]

352

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Inside the house there are a few furnishings, as among all peoples
 of Chinese origin. There are benches, tables, camp beds, dishes,
 iron and copper cooking utensils and opium smoking accessories, all
 so repulsively filthy that even the least delicate would hesitate to
 enter and stay in these hovels, where vermin swarm under the pro-
 tection of the ancestors' altar.

198

202

Although amongst themselves and with their families the Meos
 speak a rather unharmonious language, nearly all the men can under-
 stand and speak Qouane-hoa, the language of the Chinese mandarins,
 which is the official language in Yunnan. They can neither read nor
 write Chinese characters, and have no system of writing of their own.